

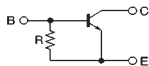
Digital transistors (built-in resistor)

DTC144GE / DTC144GUA / DTC144GKA / DTC144GSA

●Features

- 1) The built-in bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input, and parasitic effects are almost completely eliminated.
- 2) Only the on / off conditions need to be set for operation, making device design easy.
- 3) Higher mounting densities can be achieved.

●Circuit schematic



E : Emitter
C : Collector
B : Base

●Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V _{CB0}	50	V
Collector-emitter voltage		V _{CE0}	50	V
Emitter-base voltage		V _{EB0}	5	V
Collector current		I _c	100	mA
Collector Power dissipation	DTC144GE	P _c	150	mW
	DTC144GUA / DTC144GKA		200	
	DTC144GSA		300	
Junction temperature		T _j	150	°C
Storage temperature		T _{stg}	-55~+150	°C

●Package, marking, and packaging specifications

Part No.	DTC144GE	DTC144GUA	DTC144GKA	DTC144GSA
Package	EMT3	UMT3	SMT3	SPT
Marking	K26	K26	K26	—
Packaging code	TL	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	3000	5000

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	50	—	—	V	I _c =50 μA
Collector-emitter breakdown voltage	BV _{CE0}	50	—	—	V	I _c =1mA
Emitter-base breakdown voltage	BV _{EB0}	5	—	—	V	I _E =160 μA
Collector cutoff current	I _{CB0}	—	—	0.5	μA	V _{CB} =50V
Emitter cutoff current	I _{EB0}	65	—	130	μA	V _{EB} =4V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	0.3	V	I _c =10mA, I _E =0.5mA
DC current transfer ratio	h _{FE}	68	—	—	—	I _c =5mA, V _{CE} =5V
Emitter-base resistance	R	32.9	47	61.1	kΩ	—
Transition frequency	f _T	—	250	—	MHz	V _{CE} =10V, I _E =5mA, f=100MHz

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